

AGES 14+



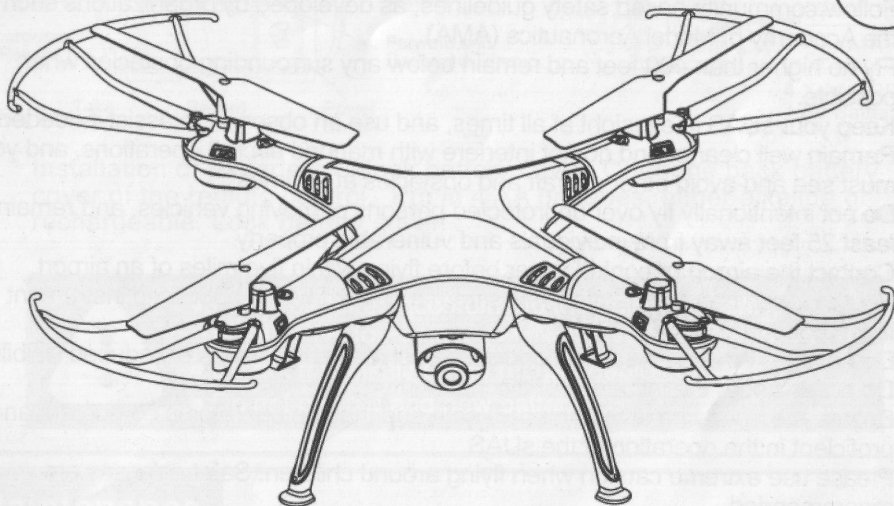
DYNAMIC

AERIAL SYSTEMS

4CH 2.4GHz REMOTE CONTROL QUADCOPTER

X4 SPARTAN

BC



1 INSTRUCTION MANUAL

IMPLEMENT STANDARD: GB/T26701-2011

Main Features

- Six-axis gyro stabilization provides much faster correction of attitude displacement than a 3 axis system. In addition to the three pitch, roll, and yaw gyro sensors, three additional accelerometers are included that sense and automatically compensate for un-commanded movement in the three dimensions.
- 4 Channel function provide stable flying and easy operation.
- 2.4GHz radio controlled for no interference and enhanced range.
- 2MP digital photo and video camera
- Multi-direction flips with 360 degree eversion
- Headless mode allows the quadcopter's direction of flight seen from your viewpoint to follow the controls directly, no matter in which direction the quadcopter is pointing.
- Emergency return function allows the X4 Spartan to head back to your general area.

Introduction

Thank you for choosing Dynamic Aerial Systems and allowing us to be part of your wonderful and exciting adventure into the world of recreational unmanned aircraft. It is a exciting time. RC flight used to be a complicated and expensive hobby. Now with the introduction of low cost, lightweight, durable, high power drones such as the X4, the world of RC flight is accessible to anyone. We highly suggest you take your X4 on its maiden voyage in a large, open field. This will allow you to fully get comfortable with its controls and features.

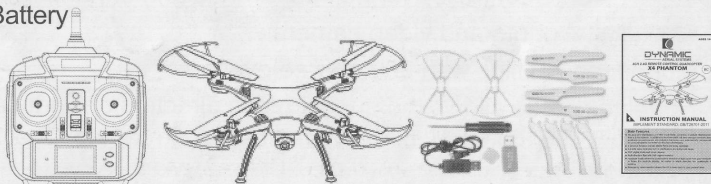
Guidelines for sUAS (Small Unmanned Aircraft Systems) Users

1. Follow community-based safety guidelines, as developed by organizations such as the Academy of Model Aeronautics (AMA).
2. Fly no higher than 400 feet and remain below any surrounding obstacles when possible.
3. Keep your sUAS in eyesight at all times, and use an observer to assist if needed.
4. Remain well clear of and do not interfere with manned aircraft operations, and you must see and avoid other aircraft and obstacles at all times.
5. Do not intentionally fly over unprotected persons or moving vehicles, and remain at least 25 feet away from individuals and vulnerable property.
6. Contact the airport or control tower before flying within five miles of an airport.
7. Fly no closer than two nautical miles from a heliport with a published instrument flight procedure.
8. Do not fly in adverse weather conditions such as in high winds or reduced visibility.
9. Do not fly under the influence of alcohol or drugs.
10. Ensure the operating environment is safe and that the operator is competent and proficient in the operation of the sUAS.
11. Please use extreme caution when flying around children. Safety glasses are recommended.
12. Do not fly near or over sensitive infrastructure or property such as power stations, water treatment facilities, correctional facilities, heavily traveled roadways, government facilities, etc.
13. Check and follow all local laws and ordinances before flying over private property.
14. Do not conduct surveillance or photograph persons in areas where there is an expectation of privacy without the individual's permission.

Contents

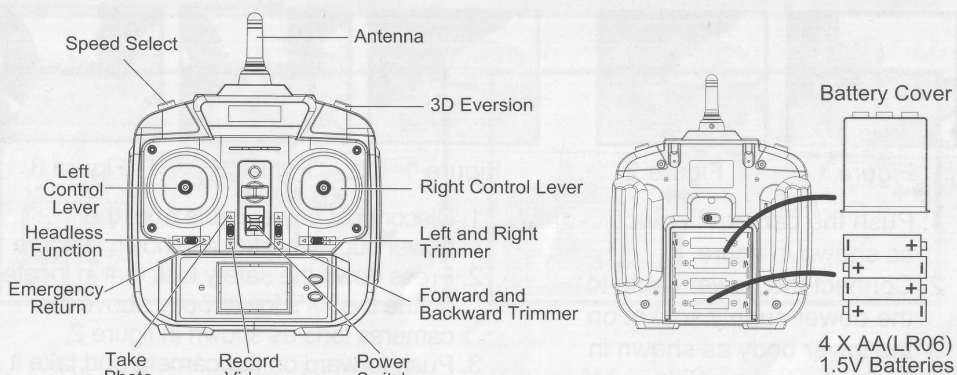
Following items are included:

- X4 Spartan Quadcopter
- 2.4GHz Remote Controller
- Li-Po Rechargeable Battery
- 2MP Camera
- 4GB Memory Card
- Card Reader
- USB Charging Wire
- Screwdriver
- 4 Replacement Blades
- Instruction Manual



Getting to Know Your Transmitter

Introduction of Transmitter:



Installation of batteries: Unlock battery cover. Open the back battery cover of the remote control. Put in 4 AA batteries, either alkaline or rechargeable. Lock battery cover.



- Install batteries according to the correct polarity, Positive (+) to Positive (+), Negative (-) to Negative (-).
- Do not mix alkaline and rechargeable batteries.
- Do not mix old and new batteries.

Maintenance

- Use a soft cloth to clean your quadcopter after use.
- Do not leave in direct sunlight or extreme heat.
- Do not expose to water.
- Check plugs, guards, blades and leaning gear after each use. Repair or replace any damaged parts before next flight.

Installing the Landing Skids and Blade Guards

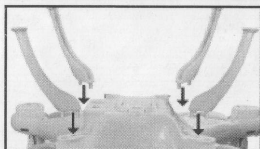


Figure 1

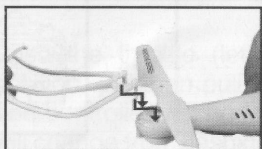


Figure 2

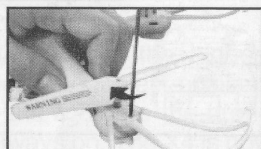


Figure 3

1. Insert landing skid into mounting holes on lower body as shown in figure 1 and tighten screws.
2. Install the blade guards to each corner (figure 2) and tighten screws (figure 3).

Installing the Camera

Camera Installation:

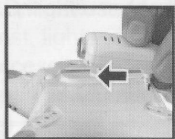


Figure 1

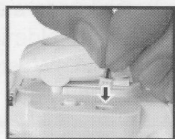


Figure 2

1. Push the camera in place as shown in figure 1.
2. Connect the power cable to the power supply socket on the lower body as shown in figure 2.

Removal of Camera:



Figure 1

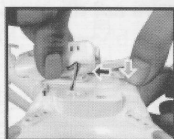


Figure 2



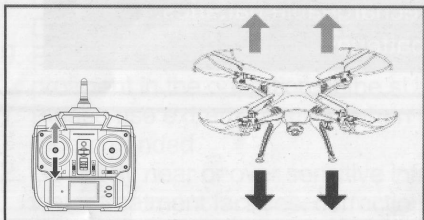
Figure 3

1. Disconnect power cable from the power supply socket as shown in figure 1.
2. Press down the safety lock that is located on the the X4's lower body above the camera's lens as shown in figure 2.
3. Push forward on the camera and take it off as shown in figure 3.

Operating Instructions

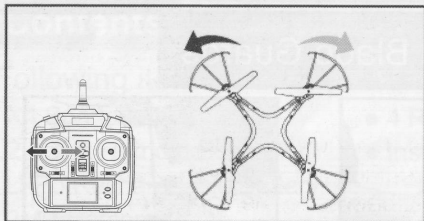
Operating direction

Hover Up and Down



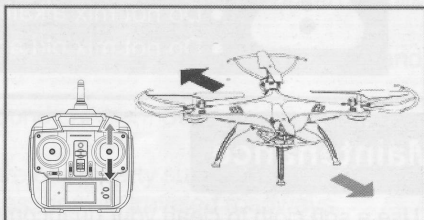
Push the throttle (left joystick) up or down. This will increase or decrease upward thrust.

Rotate Left or Right



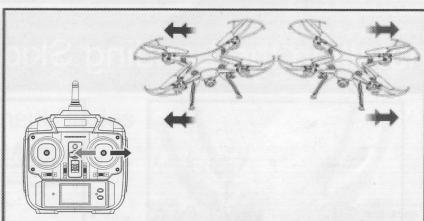
Push the throttle (left joystick) left or right. This will make the X4 rotate it left or right. This is very useful when aiming your camera.

Forward and Backward



Push the directional (right joystick) up or down. This will make the X4 fly forward or backward.

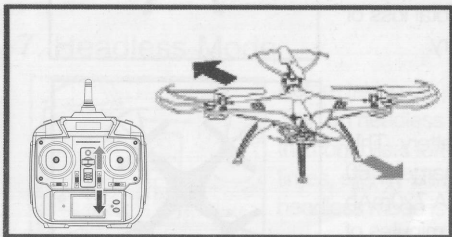
Flying Sideways



Push the directional (right joystick) left or right. This will move the X4 to the left or right.

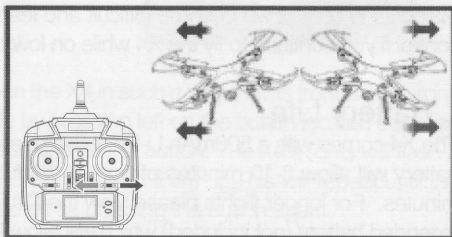
Fine Tuning the Controls

Forward / Backward Fine Tuning



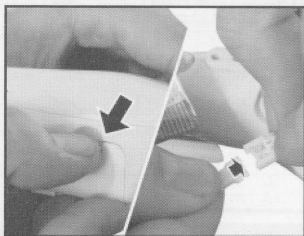
If your X4 is drifting forward or backward on its own than you need to correct it by pressing the fine-tuning button up or down.

Left / Right Fine Tuning

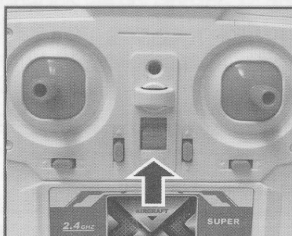


If your X4 is drifting left or right on its own than you need to correct it by pressing the fine-tuning button left or right.

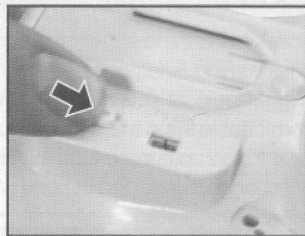
Syncing Controller and Getting Ready to Fly



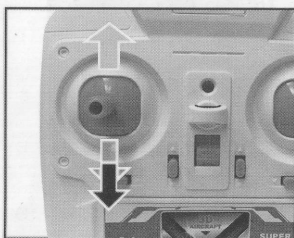
1. Open the X4's battery cover and connect Li-Po battery.



2. While both joysticks are centered, turn the controllers' power switch on.



3. Turn on the X4 via the power switch located on the bottom of the drone's body.

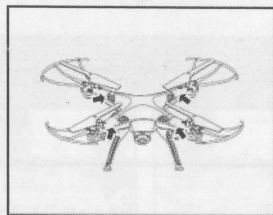


4. Push the throttle (left joystick) up to the highest position and then pull it back to the lowest position. The controller will beep and the lights on the drone will change from flashing to always on. The X4 is now in pre-flight mode and ready to fly.

Features

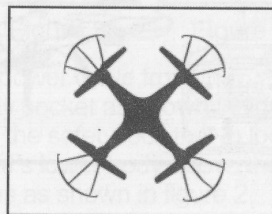
1. Low-Power Alert

While controller is synced, if the four indicator lights on the bottom of the X4 start to flash. This means that the X4's battery is running low. Fly the quadcopter back to your location and land. Maintaining control will become difficult and lead to total loss of control if you continue to fly the X4 while on low battery.



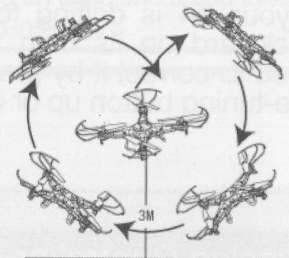
2. Battery Life

The X4 comes with a 500mAh Li-Po rechargeable battery. This battery will allow 8-10 minutes of flight. It will fully charge in 60 minutes. For longer flights please view the DAS720A 720mAh extended battery (not included) which will allow 9-12 minutes of flight time.



3. 3D Eversion Flips

After you become familiar with the basic flight operations you can start doing more complex maneuvers such as the 360 degree flip. First fly your X4 to a height 6 feet (2 meters). Then press the 3D eversion button located next to the antenna on the right side of the controller. Then immediately following that, push the right joystick in any direction to do a 360 degree flip.

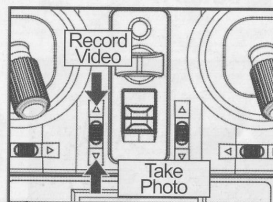


4. Speed Boost

The X4 has three levels of speed. The level directly effects the your turning sharpness and forward momentum. It is highly suggested that you start with the default level 1 until you are comfortable flying the X4. The speed increase bottom is located next to the antenna on the left side of the controller. One press will change to level 2, a second will go to level 3 and a third press will return to level 1.

5. Photography / Video

Make sure the 3-pin camera plug is connected to your X4. Turn on your X4 and sync the controller. The light in the camera will be blue. This means the camera is ready for photos or video. The camera will blink red if there is no memory card installed. The photo / video button is located between the controller's left joystick and power button (see picture). Pressing the button up will cause the cameras light to flash red one time and take a photo. Pressing the button down will cause the cameras light to stay red and video recording will start. Press the button down again to end recording.

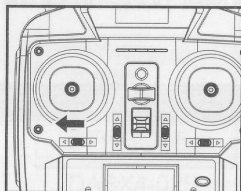


6. Thrown Launch

The X4 is equipped with a 6 axis gyroscope. This allows you to throw the X4 upside down, sideways. Then by pushing the throttle (left joystick) up will cause the X4 to automatically level out and hover.



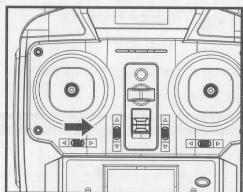
7. Headless Mode



Before taking off, position the X4 in such a way that its front is your front. Turn on headless mode by pressing left on the button located between the controllers left joystick and power button. The X4's lights will flash 2 times, slightly pause, then flash again 2 times. This will repeat until the headless mode is turned off by pressing the button again.

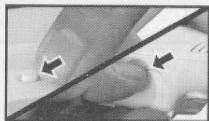
When you take off with the drone pointing in the front, algorithms inside of the drone's micro-controller ensure that any directional change is compensated. In other words, even when you turn your drone 90 degrees to the left, it'll still go forward when you push the rudder forward (on a non-headless mode drone, this would make the drone go left).

8. Emergency Return Button



There will be times when you may lose your orientation and not know which way your drone is facing. The X4 is equipped with an emergency return function. This feature will attempt to return the drone to the general location of where you synced your controller to the X4. Please note that this will not land the X4 and will not make the X4 to stop. When the X4 is close enough you still need to take back control by using the left and right joystick. Also note that the X4 will try to take a straight path back to the area. It will not avoid obstacles such as buildings, trees or people.

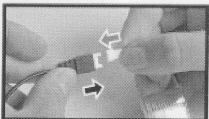
Charging the Battery



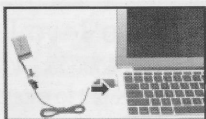
1. Push the on / off switch located on the bottom of the X4 to the off position and open the battery cover.



2. Disconnect the power wire from the power port and remove the battery.



3. Insert the battery power connector into the small end of the USB charging cable.



4. To charge the battery, insert the USB charger into any USB port on a computer or laptop. The indicator light will be off when charging. When fully charged the indicator light will be red.



5. Reconnect the battery to the X4's power port and close that battery cover.

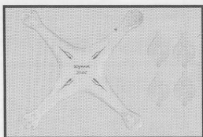
Cautions When Charging:

1. The battery needs to be in a dry, ventilated area and away from any heat source while charging.
2. Always remove the battery from the X4 while charging.
3. Charging process should be supervised by an adult.
4. If the battery is hot after flying, please allow it a few minutes to cool down before charging.
5. Do not use the battery if it appears to be swollen.

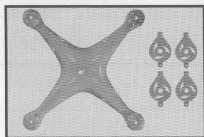
Maintenance Procedure

Troubleshooting	Causes	Solutions
Aircraft has little or no response	1. Low-voltage protection, battery needs to be recharged 2. Controller batteries need to be recharged 3. Interference from another source	1. Charge or replace the battery 2. Charge or replace batteries 3. Move to a different location to fly
Aircraft drifts in a direction	1. Trim is not adjusted 2. Wind	1. Use left, right, forward or back trim button to adjust 2. Change location or wait for wind to reduce
Headless mode's direction is not correct	1. You moved your starting location	1. Turn off X4 and controller for 5 seconds. Re-sync and reengage headless mode
Parts break due to impact	1. User crashes drone due to user error	1. All parts are available (see next page).

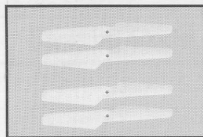
X4 Spartan Spare Parts



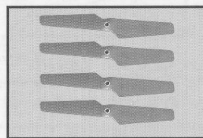
DASX4-01A
Fuselage (white)



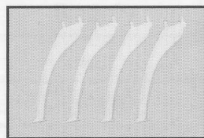
DASX4-01B
Fuselage (black)



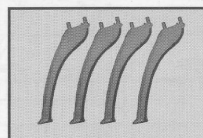
DASX4-02A
Blades (white)



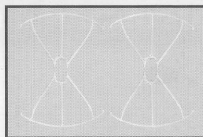
DASX4-02B
Blades (black)



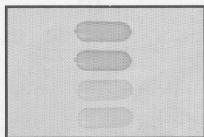
DASX4-03A
Landing Skids (white)



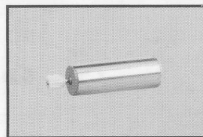
DASX4-03B
Landing Skids (black)



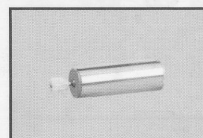
DASX4-04
Blade Guards



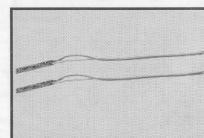
DASX4-05
Light Covers



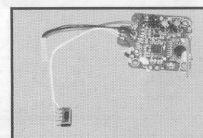
DASX4-06
Motor A



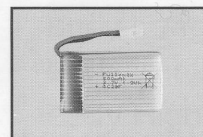
DASX4-07
Motor B



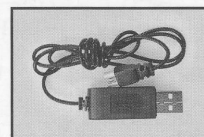
DASX4-08
LED Light



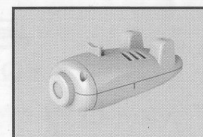
DASX4-09
Mainboard



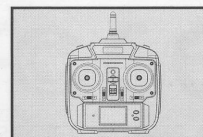
DASX4BT-720
Extended Battery



DASX4-11
USB Charger

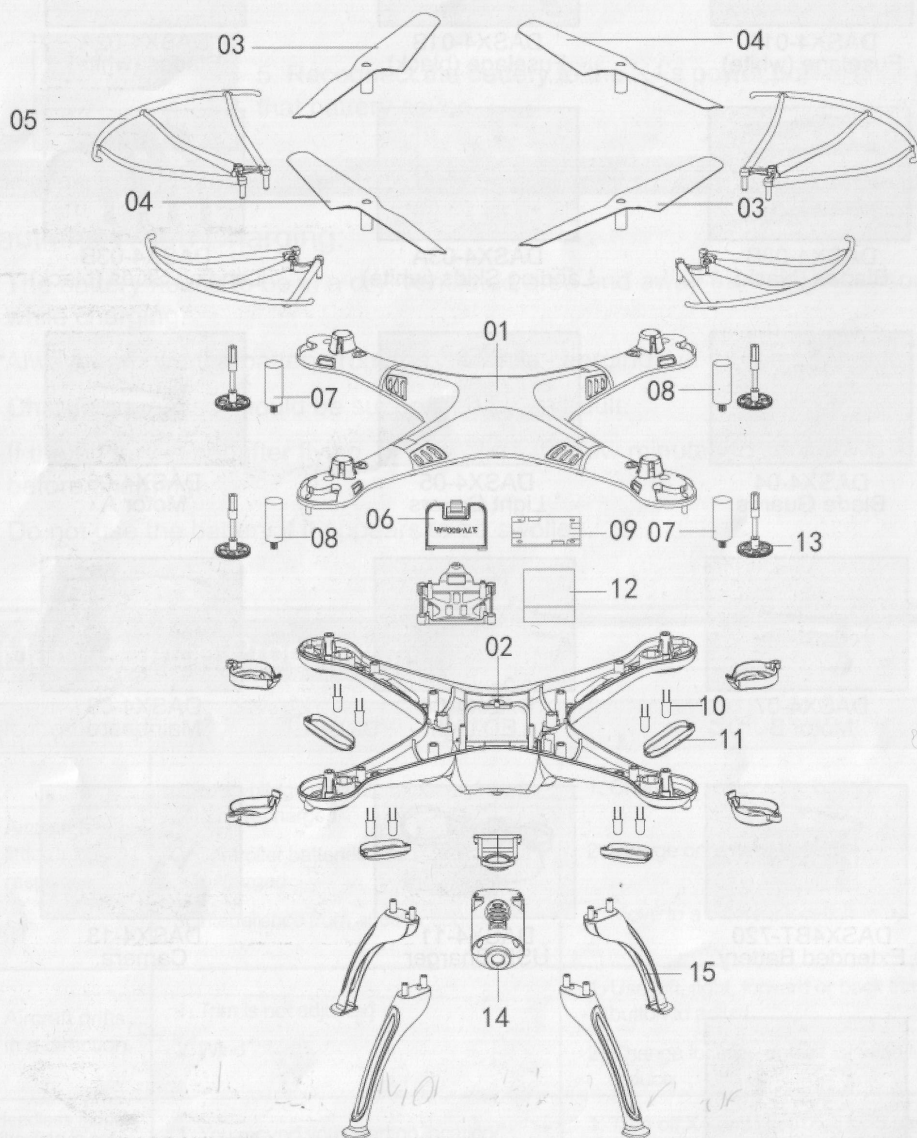


DASX4-13
Camera



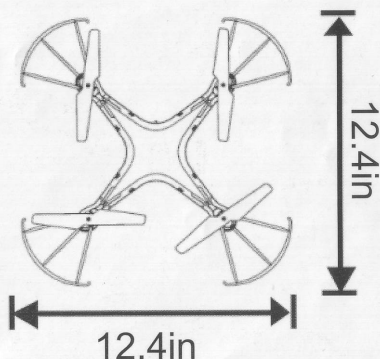
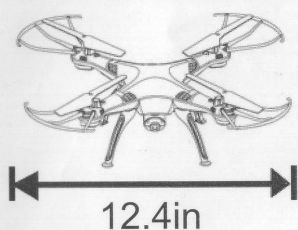
DASX4-12
Controller

Parts Diagram



Code	Description	Quantity	Code	Description	Quantity	Code	Description	Quantity
01	Upper Body	1	08	Receiver Motor	2	15	Landing Skids	4
02	Lower Body	1	09	Mainboard	1			
03	Rotating Blade	2	10	LED Light	8			
04	Reversing Blade	2	11	Light Boards	4			
05	Blade Guards	4	12	Battery	1			
06	Battery Cover	4	13	Gear	4			
07	Rotating Motor	2	14	Camera	1			

Main Parameter



Body Length: 12.4in

Body Width: 12.4in

Body High: 4.1in

Weight: 0.25 lbs

Main Motor code: Ø8

Battery: 3.7V 500 mAh Li-poly



SPECIFICATIONS AND COLORS OF CONTENTS MAY VARY FROM PHOTO.

For support please contact us at:
support@dynamicaerialsystems.com